

## 5Es card sort: possible answer sheet

### ENGAGE

#### Teacher

- Elicits students' thoughts and understanding
- Assesses responses to diagnose alternative conceptions
- Generates curiosity
- Asks 'What do you already know about this?'

#### Student

- Talks about initial ideas in response to a question or activity
- Shows interest in the topic
- Thinks about and articulates what he/she knows about a topic

### EXPLORE

#### Teacher

- Challenges current understanding by use of activities
- Observes and listens to students as they interact
- Provides time for students to puzzle through problems

#### Student

- Records observations and ideas
- Tries alternatives and discusses with others
- Works cooperatively in small group activities

### EXPLAIN

#### Teacher

- Presents scientific explanations to assist students with conceptual change
- Formally provides definitions, terms and new labels

#### Student

- Listens critically to others' explanations
- Explains possible answers or solutions to others
- Thinks about experiences in trying to give explanations

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### ELABORATE

#### Teacher

- Assists students with developing student-planned investigations
- Encourages students to apply their knowledge and skills in new situations

#### Student

- Uses scientific concepts and vocabulary in new situations
- Assists with the design of a science investigation
- Applies new labels, definitions or explanations
- Draws reasonable conclusions from evidence after investigating

### EVALUATE

#### Teacher

- Looks for evidence that students have changed their thinking
- Allows students to assess their own learning
- Observes students as they present new knowledge or skills

#### Student

- Demonstrates an understanding of new knowledge or skills
- Re-represents a science understanding for summative assessment
- Reflects on the learning journey